

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2015/2016

TSM2691 – NETWORK SYSTEM FOR MULTIMEDIA
(All Sections / Groups)

5 OCTOBER 2015
9.00 A.M. – 11.00 A.M.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages (including cover page) with 7 Questions only.
2. Attempt **SIX** out of **SEVEN** questions. The distribution of the marks for each question is given. This paper carries **60 marks**.
3. Please print all your answers in the Answer Booklet provided.

Question 1 (10 Marks)

- a. What is '*streaming multimedia*'? (2 marks)
- b. Differentiate between 'captured media' and 'synthesized media'. Give one example for each media. (4 marks)
- c. What is the difference between 'local multimedia' and 'networked multimedia'? Give one sample application for each multimedia. (4 marks)

[Total = 2 + 4 + 4 = 10]

Question 2 (10 Marks)

- a. Explain FIVE (5) factors which affect the legibility of text. (5 marks)
- b. What are the FOUR(4) key things you have to consider when you study fonts and faces? (2 marks)
- c. How much storage does a 640 x 480 grayscale image require? (3 marks)

[Total = 5 + 2 + 3 = 10]

Continued...

Question 3 (10 Marks)

- a. What are the TWO (2) types of display methods used to display video? (2 marks)
- b. Discuss TWO (2) advantages of sequential scan. (2 marks)
- c. If a mono sound is recorded at 44000 samples per second at 16 bits per sample for 1 minute, how big is the uncompressed file in MB? (3 marks)

- d. Given the following information:

Frame size= 640 x 480,
Bit rate = 24,
50 fps and
video length = 20 minutes.

Compute the digital video file size. (3 marks)

[Total = 2 + 2 + 3 + 3 = 10]

Question 4 (10 marks)

- a) Explain THREE(3) types of compression. (3 marks)
- b) Discuss the FOUR (4) entropy encoding techniques. (4 marks)
- c) Briefly describe how the web cache at the proxy server functions. (3 marks)

[Total = 3 + 4 + 3 = 10]

Continued...

Question 5 (10 Marks)

- a) Explain THREE (3) requirements for an ideal scheduling discipline. (3 marks)
- b) What are the characteristics of Round Robin Queuing? Give TWO (2) problems of Round Robin Queuing. (4 marks)
- c) Discuss FOUR (4) factors for synchronization accuracy specification. (4 marks)

[Total = 3 + 4 + 4 = 10]

Question 6 (10 Marks)

- a) Define Throughput. (3 marks)
- b) Describe FOUR (4) parameters used to characterize the performance of networks. (4 marks)
- c) Differentiate between 'Continuous Event Simulation' and 'Discrete Event Simulation'. (3 marks)

[Total = 3 + 4 + 3 = 10]

Question 7 (10 Marks)

- a) What is 'Sound'? (2 marks)
- b) Suggest FOUR (4) ways to reduce a digital video file size. (4 marks)
- c) Briefly describe MOV video file format. (4 marks)

[Total = 2 + 4 + 4 = 10]

End of Paper